Determinants of Pre-Service Students' Choice to Teach Secondary Agricultural Education

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The purpose of this study was to explain and predict the factors that influence senior-level agricultural education students' choice to become a secondary agriculture teacher. The study focused on the extent to which beliefs and attitudes toward teaching influenced students' intent to select teaching secondary agricultural education as a career. An adaptation of the FIT-Choice® Scale instrument was distributed to senior-level students enrolled at institutions with teacher development programs to certify secondary agriculture teachers within nine states. A total of 145 students completed the instrument. Overall, characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership were not significant predictors of intent to teach. However, two beliefs about teaching subconstructs ("teacher morale," and "expert career") were found to be significant predictors of students' intent to teach. Similarly, four attitudinal sub-constructs ("fallback career," "working with adolescents," "intrinsic career value" and "job security") were significant predictors of intent to teach. Eight percent of intent to teach can be accounted for by attitude when controlling for beliefs.

Keywords: agricultural education; preservice teachers; recruitment

Introduction

The shortage of secondary agricultural education teachers is a prevalent occurrence that has been documented as early as 1921 (Camp, 2000). Parmley, Bowen, and Warmbrod (1979) concluded that the teacher shortage problems did not result from a shortfall in the number of graduates, rather from the low percentage of graduates who chose teaching upon graduation. The supply and demand study from agricultural education graduates in 2006 reported that 53 percent of graduates would accept positions teaching secondary agricultural education in the fall of 2007 (Kantrovich, 2007), which supports the tendency of graduates that Parmley et al. found over 25 years ago. Furthermore, Kantrovich stated that teacher shortage epidemic has potential to reach sweeping proportions if teacher preparation programs are unable to recruit and retain additional students into agricultural education. In order to improve recruitment efforts, it is critical to target the range of motivations, including altruistic, intrinsic and extrinsic motivators, which attract people to the teaching profession in the first place (Richardson & Watt, 2006).

The core issue to filling new and vacant teaching positions is supplying an adequate number of graduates to fill those positions. This is encouraging, as it seems that the number of available graduates in agricultural education exceeds the number of new and vacant positions. Kantrovich (2007) reported 785 new graduates and 652 positions available in 2006. Yet, due to the matriculation of graduates into careers other than teaching, a significant number of positions go unfilled each year. This is problematic as those unfilled positions either are left unfilled for the year or programs are closed entirely. In the 2006 National Supply and Demand study 401 positions of the 652 positions were filled leaving 251 positions unfilled (Kantrovich, This occurrence will force school 2007). administrators to hire uncertified or alternatively certified teachers, leave the position vacant, or worse close the program (Roberts & Dyer, 2004). Perhaps even more distressing is that agricultural education has not experienced a single year since 1965 in which all teaching positions have been filled (Kantrovich, 2007).

Each year, students enroll in agricultural education as a major course of study at higher education institutions across the United States. Reasons for majoring in agricultural education, as identified by Hillison, Camp, and Burke (1987), included flexibility of the program that allows majors to enter jobs other than teaching. Inspiration from local agriculture teachers also influences student's choice of career path (Park & Rudd, 2005). Additionally, it has been noted that students are drawn to teaching because intrinsic motives such as having the opportunity to serve others, touch people's lives and feeling like they had a "calling" to the profession (Harms & Knobloch, 2005). Extrinsic motives identified by Harms and Knobloch included salary and benefits, balance between career and personal time and opportunities for advancement and personal growth. Seng Yong (1995) further identified that people are likely attracted to teaching because of the altruistic, intrinsic and extrinsic motives. To improve recruitment and retention efforts, tapping into this motivation is important when working with pre-service teachers and when assisting them with their career choices.

Identifying and recruiting teachers to the profession has been an ongoing concern for more than two decades (Wright & Custer, 1998). An additional concern raised by Harms and Knobloch (2005) is that pre-service agricultural education teachers are likely to be sought after by non-profit organizations and industry because of their caring and competent qualities. Today's teacher candidates have multiple career options that offer attractive features (Peske, Liu, Kauffman. Johnson. & Kardos. Strategies for recruiting the excessive need for teachers are offered by Darling-Hammond and including Sykes (2003)state-supported scholarships, recruiting minorities and experts in the field, offering better incentives, and improving licensing agreements. Since. agricultural education continues to face recruitment issues, additional teacher recruitment practices are necessary to encourage students to choose a career in the profession.

Theoretical Framework

Understanding a person's behavior requires more than just knowledge of his/her intention, it is a more appropriate to measure their intention in order to predict their behavior (Fishbein & Aizen, 1975). Consequently, Fishbein and Ajzen provide the framework for which to better understand antecedents to behaviors. According to Fishbein and Ajzen, an individual will hold a positive attitude toward a given behavior if he/she believes that the performance of the behavior will lead to mostly positive outcomes. Fishbein and Ajzen suggest that many researchers fail to distinguish between beliefs, attitudes and intentions and stated that behavior is a result of intentions. Intentions, then, are a function of one's attitude, which are a result of one's beliefs or expectations that the behavior will lead to a particular outcome. Additionally, the Expectancy-Value theory is directly linked to Fishbein and Ajzen's theory with the core belief that behavior is a function of the expectancies an individual has and the value of the goal toward which the individual is working (Watt & Richardson, 2007). The Expectancy-Value theory is the overarching theory in which this study is based upon. Understanding students' motivations for choosing a teaching as a career has implications for teacher education, curriculum design, and recruitment.

The FIT-Choice® framework provides a comprehensive model to guide systematic investigation into the question of why people choose teaching (Richardson & Watt, 2006). Richardson and Watt developed a FIT-Choice® framework model which organizes the themes from the teacher education literature and locates them within the Expectancy-Value framework to explain students' choices to teach. The FIT-Choice® model (see Figure 1) contains antecedent socialization influences, followed by more proximal influences of task perceptions, self-perceptions, values, and fallback career. The task constructs include *expert career*, *highly* demanding, social status, teacher morale and salary. Similarly, values constructs contain first order component constructs. The values constructs in the model are intrinsic career value, job security, time for family, job transferability. shape future children/adolescents, enhance social equity, make social contribution, bludging, and work

with children/adolescents. These constructs ultimately lead to the choice to become a secondary agriculture teacher. The term bludging is an Australian expression meaning the laziest approach possible. The FIT-Choice® scale determines the strength of influence for a range of attitude, motivation and intent from

individuals choosing teaching as a career, this framework, founded on the Expectancy-Value theory, provides a comprehensive model to guide systematic investigation into the question of why people choose teaching as a career (Richardson & Watt, 2006).

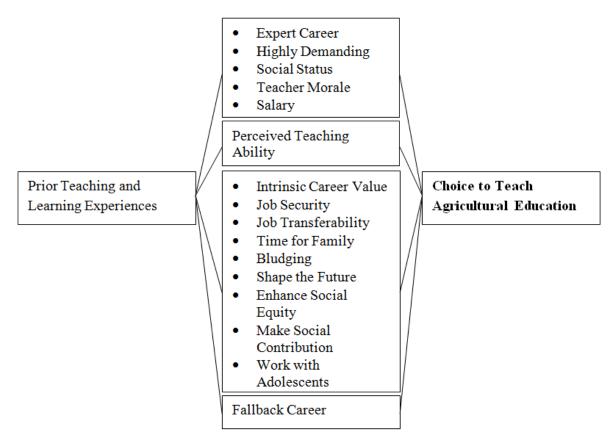


Figure 1. Ag Ed FIT-Choice Model, adapted from the FIT-Choice model by Watt & Richardson (2007).

Purpose and Research Objectives

The purpose of this study was to determine the factors that influence agricultural education students' choice to become secondary agriculture teachers. The following research objectives were developed to guide the study:

1. Describe characteristics of students majoring in agricultural education (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership).

- 2. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' demographic characteristics.
- 3. Predict students' intent to teach (satisfaction with choice) from the belief factors (expert career, highly demanding, social status, teacher morale, salary).
- 4. Predict students' intent to teach (satisfaction with choice) from the attitudinal factors (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents,

- prior teaching and learning experiences, social influences).
- 5. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' attitude where controlling for beliefs.

Methods/Procedures

This study utilized a nonexperimental descriptive-correlational research design method to meet the purpose and research objectives of the study. This type of research often uses questionnaires to gather information from groups of subjects (Ary, Jacobs, & Razavieh, 2002). The target population was senior agricultural education students enrolled in a teacher preparation program. Institutions with teacher preparation programs in Agricultural Education were selected from states contiguous to Missouri by reason of proximity ease of contact, cost, and familiarity with the teacher education programs within each state. Twentysix teacher education programs within Arkansas, Illinois, Iowa, Kansas, Kentucky, Missouri, Nebraska, Oklahoma, and Tennessee were initially identified from the American Association for Agricultural Education Directory (2007). Of the 26 teacher education programs within the nine-state area, 19 programs were included in the study; the others opted not to participate or did not have student teachers in the fall of 2008. The 19 teacher education programs were selected based upon a single criterion established a priori. The selection criterion was access to senior-level level agricultural education majors who were to participate in student teaching during the fall of 2008 or spring of 2009. Because students in these programs tend to be defined cohort groups. arguably, cohorts for subsequent years are likely to represent similar dispositions. Oliver and Hinkle (1982) argued that defined student cohorts could be considered representative of future similarly defined cohorts. Consequently, this study is viewed as a time and place sample.

The data collection instrument was adapted from the FIT-Choice® Scale (Watt & Richardson, 2007). The FIT-Choice® Scale was developed to measure beliefs, attitude and intention of teacher candidates (Richardson & Watt, 2006). Dr. Helen Watt provided written permission allowing the FIT-Choice® to be

utilized and adapted for this study (personal communication, September, 26, 2008). Section one of the instrument included 40 statements designed to collect data related to students' attitude toward becoming a secondary agricultural education teacher. These questions began with the stem "I want to become a high school agriculture teacher because," and included questions such as "I like teaching about agriculture," "it will allow me to shape children's values," and "I have had good teachers as role models." The questions are grouped into 13 sub-constructs to measure attitude including "make a social contribution," "prior teaching and learning," "ability," "work with adolescents," "intrinsic career value," "job security," "enhance social equity," "shape the future," "social influence," "job transferability," "time for family," "fallback career," and "bludging." Section two of the instrument was designed to collect data related to students' beliefs about teaching. These 15 items began "Compared with other with the stem, professionals," and included questions such as "teaching agriculture is a highly skilled occupation" and "agriculture teachers are perceived as professionals." The questions are grouped into five sub-constructs that measured beliefs including "expert career," "social status," "teacher morale," "salary," and "highly demanding." Section three included six statements related to students' intent to teach and are measured by two sub-constructs, "satisfaction with choice" and "social dissuasion." For each item, students were asked to identify their level of agreement. response scale was a five-point Likert scale with the following choices: 1 = definitely disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = definitely

A panel of experts reviewed the instrument to address face, construct, and content validity. The panel consisted of seven university faculty members representing higher education intuitions from across the United States and Australia. A pilot study was conducted in September of 2008 with freshman level agricultural education students (n = 29) at the University of Missouri. This group of students was selected because of their similarity in teaching interests to that of the target population. As a result of the pilot test, modifications were made to the final instrument including

clarification of questions and minor formatting. The pilot test also served to estimate the reliability for each construct. Cronbachs' alpha was used as an estimate for reliability of the Ag Ed FIT Choice questionnaire from the data collected during the pilot test (n = 29). The following results were reported, "shape the future of adolescents" was .90, "job security," "work with adolescents," and "social influence" was .86, "salary" was .84, "ability" and "enhance social equity" were .78, "prior teaching and learning" was .77, "intrinsic career value" was .76, "time for family" and "expert career" were .75, "make social contribution" and "satisfaction with choice" were .67, "highly demanding" was .65, "social status" and "social dissuasion" were .63, "fallback career" was .60 and "job transferability" was .52. Generally .70 and above is an acceptable alpha; however a lower alpha is not necessarily a detriment as it may measure several attributes rather than only one, which can result in a deflated Cronbachs' alpha and may be acceptable to have modest reliability (Nunnally, 1978).

Data were collected using five points of contact. Agricultural education faculty members at the 19 institutions were contacted via email in early September of 2008 and asked to assist in the data collection process. Faculty members were asked to identify one primary faculty contact and the number of senior-level agricultural education students who would be able to participate. Once consent was obtained from the faculty members and students were identified, instructions for the study were sent via email. This pre-notice letter explained the purpose of the study, the process of completing the instrument, the responsibility of the faculty timeline member. specified and. information. The second contact with the selected faculty members included a mailed packet of questionnaires, instructions and self addressed, stamped return envelope. responsibility of the primary faculty contact was collect, and distribute. return questionnaires to the researcher. An email was

sent two weeks later that contained information similar to the third contact and served as either a thank you or reminder for those who had not yet returned questionnaires. The fourth contact was made with institutions that were missing data via email to determine whether or not they needed additional time or additional copies of the questionnaires. Following responses from those institutions, a packet was mailed to the primary faculty contact that had either not yet begun the instrument or to those who requested additional copies. The final contact was made via email February 2, 2009. Results include a response rate of 93% as 18 of the 19 institutions that initially agreed to participate questionnaires for a total of 145 data points (n =145). Data were analyzed using SPSS® 15.0 for Windows.

Results

Research objective one sought to analyze the characteristics (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership) of senior agricultural education students (see Table 1). The majority of respondents (53.47%) were female. Compared to their peers, 67 respondents (46.53%) identified themselves as having more agriculture experience, 57 respondents (39.58%) identified themselves as having the same amount of agriculture experience and 20 respondents (13.89%) identified themselves as having less agriculture experience than their peers. More than 125 of the respondents (86.21%) took one or more school-based agriculture classes while in high school. A majority of the 127 respondents (87.59%) had been members of the National FFA Organization. Nearly four-fifths of the 112 respondents (78.32%) reported having a Supervised Agricultural Experience (SAE) project. The majority of the 103 respondents (71.53%) were members of the 4-H.

Table 1 Characteristics of Senior Level Agricultural Education Students (n = 145)

| Characteristics of Sentor Level Agricultural Education Characteristic | f | % | М | SD |
|---|-----|-------|------|------|
| Gender | | | | |
| Female | 77 | 53.47 | | |
| Male | 67 | 46.53 | | |
| Agriculture Experience ^a | | | | |
| More than Others | 67 | 46.53 | | |
| Same as Others | 57 | 39.58 | | |
| Less than Others | 20 | 13.89 | | |
| Enrolled in School Based Agricultural Education | | | | |
| Yes | 125 | 86.21 | | |
| No | 19 | 13.10 | | |
| Years of Enrollment | | | 4.05 | .88 |
| FFA Membership | | | | |
| Yes | 127 | 87.59 | | |
| No | 17 | 11.72 | | |
| Years of FFA Membership | | | 5.52 | 1.91 |
| Supervised Agricultural Experience Project | | | | |
| Yes | 112 | 78.32 | | |
| No | 31 | 21.68 | | |
| 4-Membership | | | | |
| Yes | 103 | 71.53 | | |
| No | 41 | 28.47 | | |
| Years of 4-H Membership | | | 7.27 | 3.71 |

^aPerceived agriculture experience compared to their peers

Research objective two utilized stepwise multiple linear regression to identify predictors of students' intent to teach (satisfaction with choice) from the following antecedent variables: selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. Intercorrelations were calculated to check for multicollinearity in the analyses. When inspecting the test for multicollinearity of bivariate correlations .80 was set a priori as the cutoff value for concern. According to Berry and Feldman (1991), bivariate correlations between independent variables yielding a .80 or higher were considered to display a high degree of multicollinearity. Multicollinearity was not a violation of the statistical assumptions.

analysis revealed that none of the selected student characteristics were significant (p < .05) predictors of students' intent to teach agriculture education.

Stepwise multiple linear regression was used to predict students' intent to teach from the subconstructs of beliefs about teaching ("expert career," "highly demanding," "social status," "teacher morale," "salary"). and Multicollinearity was checked and satisfied the assumption of the test. Table 2 displays the regression model that depicts the sub-construct found to be significant predictors of beliefs about teaching. Eleven percent of students' intent to teach can be explained by the belief sub-constructs of "teacher morale" and "expert career" (Adjusted $R^2 = .11$; F(df = 2.140) =3.06; p < .05).

Table 2 Stepwise Regression of Predictors of Intent to Teach from Beliefs about Teaching (n = 145)

| Construct | R | R^2 | b | β | t-value | p- value |
|----------------|-----|-------|------|-----|---------|----------|
| | .34 | .12 | | | | |
| Teacher Morale | | | .26 | .24 | 2.99 | .03* |
| Expert Career | | | .21 | .20 | 2.40 | .02* |
| (Constant) | | | 2.48 | | 5.83 | .01* |

Note. Adjusted R^2 =.11; F(2,140) = 3.06, *p < .05

Research objective four utilized stepwise multiple linear regression to predict the dependent variable, students' intent to teach ("satisfaction with choice") from independent variables, sub-constructs of attitude toward teaching ("ability," "intrinsic career value," "fallback career," "job security," "time for family," "job transferability," "shape the future of adolescents," "enhance social equity," "make social contribution," "work adolescents," 'prior teaching and learning experiences," "social and influences").

Multicollinearity was checked and satisfied the assumption of the test. Table 3 displays the regression model that depicts the four subconstructs found to be significant predictors of students' attitude about teaching agriculture. Table 3 also highlights that 61% of students' intent to teach can be explained by the subconstructs of "fallback career," "working with adolescents," "intrinsic career value," and "job security" (Adjusted R^2 = .61; F (4, 138) = 2.43; p < .05).

Table 3 Stepwise Regression of Predictors of Intent to Teach from Attitude towards Teaching (n = 145)

| Construct | R | R^2 | b | β | t-value | p- value |
|------------------------|-----|-------|------|-----|---------|----------|
| | .79 | .62 | | • | | |
| Fallback career | | | 33 | 38 | -5.48 | .01* |
| Work with Adolescents | | | .38 | .32 | 5.60 | .01* |
| Intrinsic Career Value | | | .29 | .24 | 3.39 | .01* |
| Job Security | | | .21 | .17 | 3.10 | .01* |
| (Constant) | | | 1.42 | | 2.70 | .01* |

Note. Adjusted $R^2 = .61$; F(4.138) = 2.43, *p < .05

A hierarchical regression as used to determine the amount of unique variance in the students' intent to teach that can be accounted for by attitude toward teaching agricultural education when controlling for beliefs about teaching (see Table 4). Hierarchical regression is used when controlling for variables that are known to impact the dependent variable, this allows the researcher to identify the amount of unique variance accounted for by a particular independent variable of interest. The

independent variable that is entered first is what the researcher wants to control for, in this case beliefs about teaching, then enter the next independent variable (attitude toward teaching) to find out what it contributes above and beyond the independent variable that first went in (Huck, 2008). Controlling for beliefs about teaching, students' attitude toward teaching uniquely explained eight percent of the variance in students' intent to teach F(2, 140) = 3.06; p < .05).

Table 4
Hierarchical Regression of Intent to Teach Controlling for Beliefs (n = 145)

| Variable | R | R^2 | $R^2Change$ | b | β | t-value | p-value |
|----------------------|-----|-------|-------------|-----|-----|---------|---------|
| Control Variable | | | | | | | |
| Beliefs | .31 | .11 | .11 | .36 | .19 | 2.23 | .03* |
| Variable of Interest | | | | | | | |
| Attitude | .43 | .18 | .08 | .76 | .31 | 3.59 | .01* |
| (Constant) | | | | .30 | | .42 | .67 |

Note. Adjusted R^2 =.17; F(2,140) = 3.06, *p<.05

Conclusions, Implications and Recommendations

Conclusions and recommendations were derived from the findings of the study. Selected characteristics (sex. perceived agriculture experience compared to their peers, years enrolled in school based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership) failed to predict significant variance in students' intent to teach. suggests that these characteristics should not be utilized as clues to students' intent to teach. This begs the question, what additional characteristics should be measured? Could the lack of variance in these student characteristics lead to this conclusion? The majority of students in this study had similar backgrounds. What would the results have been with a population of students who had an atypical background? It is important to note that recruitment efforts from traditional sources should not be discouraged or abandoned. Exploring recruitment from areas outside of school-based agricultural education and diverse populations as suggested by Darling-Hammond and Sykes (2003) should be investigated.

The belief about teaching sub-constructs "teacher morale" and "expert career" were significant predictors to students' intent to teach. "Teacher morale" indicates that the students' intent to teach is based on their belief that teachers have high enthusiasm, confidence and loyalty to the profession; they are valued by society, and have a well-respected career. Teaching high school agricultural education could be promoted in this fashion. Organizations such as the National Association for Agricultural Educators and state agriculture teacher associations should create programs and

promote the profession as one that teachers enjoy and one that is well respected.

"Expert career," as a predictor of intention to teach suggests students value the complexity of the skill set that teaching requires and appreciates the high level of specialized and technical knowledge they need to be successful. The data implies that students believe that a career in teaching agriculture will give them the opportunity to share their personal knowledge and expertise about the subject, which is supported by the sub-construct "expert career." Richardson and Watt (2006) agreed with the notion that individuals are attracted to teaching as an intellectually demanding and cognitively stimulating career. Current teacher preparation programs should continue to prepare students adequately for the profession in the technical content areas in which they are expected to However, which areas of technical agriculture do students feel least prepared to teach, and what improvements should be made to current teacher preparation curriculum? Teacher educators must be aware that students appreciate this characteristic of teaching agriculture education, and maintain or update current curriculum to incorporate technical content. Students should also be aware of the variety of skills needed as an agriculture teacher and pursue opportunities to gain the technical skills they need. Academic advisors should tailor students program of study to incorporate technical coursework from areas that they are least experienced in or encourage students to seek out additional learning opportunities. For example, students could be encouraged to take a welding or woodworking class at a local community college if such coursework is not available from their institution or seek employment and volunteer opportunities to gain skills and experience in areas they are lacking.

Four sub-constructs reflecting attitude toward teaching: "fallback career," "working with adolescents," "intrinsic career value," and "job security" were significant predictors of students' intent to teach. The four subconstructs accounted for 61 percent of the variance in students' intent to teach. The subconstruct "fallback career" was comprised of questions that indicate students did not choose a career in teaching agricultural education because they planned on a different career path. Therefore "fallback career," as a predictor, would indicate that students are confident about their choice of career and did not choose teaching secondary agricultural education as a fallback career. "Working with adolescents," as a predictor, indicates that having the opportunity to work with adolescents and helping them learn is an additional factor that influences students' choice to teach. Stiegelbauer (1992) and Haves (1990) conclude that one of the main reasons students choose to teach is based on the opportunity to work with young people. "Intrinsic career value" indicates that students have an instinctive passion about teaching and genuinely enjoy it. Harms and Knobloch (2005) support this finding as teachers who choose formal education as a career had intrinsic motives. Finally, "job security" offers a student a steady career path, reliable income and secure job. This implies students understand and value the security that a career in teaching provides. As a result, careful attention to these subconstructs will assist in the development of recruitment materials and should be considered. in addition to current recruitment plans and marketing initiatives, to attract students to agriculture education. Secondary agriculture teachers and teacher educators should promote agricultural education as a career that is a match for students if they have a passion for teaching, wants to work with adolescents, and want a job that offers a steady career path. Although, many secondary agriculture teachers and teacher educators promote the profession as a "fallback career" to students it may be worthwhile to promote the profession as one that has potential instead.

Belief about teaching agricultural education seems to moderate students' attitude toward teaching as an influence to their intent to teach. Approximately eight percent of the variance in students' intent to teach can be accounted for by attitude about teaching when controlling for beliefs. Fishbein and Ajzen (1975) stated an individual would hold a positive attitude toward a given behavior if he/she believes that the performance of the behavior will lead to mostly positive outcomes. These findings suggest that the students' possess a positive attitude toward teaching agricultural education, not only are they confident about their career choice, they are comfortable teaching about agriculture. This level of comfort may be attributed to the early field experiences, reflective teaching and other teaching and learning experiences these students have had. Teacher educators should continue to support the students' confidence in their career This can be done through positive choice. teaching and learning experiences that capitalize on students' teaching abilities. educators must continue to provide opportunities for students' to work with adolescents and encourage students to acquire the technical and expert knowledge needed to be a successful agriculture teacher. Nevertheless, 92 percent of the variance remains unaccounted for. What other factors explain individuals' intent to teach agricultural education?

Identifying the factors that influence students' choice to enter a career in teaching agricultural education in the current climate of teacher shortages can provide valuable information for national and state agricultural education, FFA, teacher education, secondary agriculture teachers. These findings indicate that students' perceive themselves as having the abilities to teach well and can utilize expert and technical knowledge, that teaching is intrinsically gratifying and is a satisfying occupation, they perceive that teaching agricultural education will provide them with a high level of job security, that teaching is a well respected career, and has the potential to influence adolescents. Finally, this study of senior level agricultural education majors at 18 institutions suggests that there are a variety of factors that influence students' choice to teach. It is critical for all parties interested in agriculture education teacher recruitment to target the diversity of factors that collectively impact the decision to enter the agricultural education teaching profession.

The National Council for Agricultural Education's (2008) 10 x 15 initiative is the most ambitious effort ever to address critical issues

affecting teacher quality and recruitment of teachers into agricultural education. According to Team Ag Ed and the National Council for Agricultural Educations February, 2009 Status Report, the first phase of the 10 x 15 initiative must be to research the factors that affect recruitment into agricultural education. Therefore, several recommendations are being made for further research and evaluation concerning to teacher recruitment.

First, a comparison of students' beliefs, attitudes and intentions to teach agricultural education prior to and immediately after student teaching is warranted. This may offer insight into potential changes in attitude or beliefs students have during the course of their student teaching experience. Second, investigations into the factors that influence teacher retention would be beneficial. This may result in the development of retention programs or materials

to encourage sustained employment in agricultural education. Finally, continued evaluation of the factors that influence students' choice to teach is essential, perhaps a different approach to teacher recruitment, induction and retention is needed.

This study has identified the factors that influence students' choice to teach agricultural education. The variety of factors that were identified is important when determining how to promote the profession and recruit quality students. With collaboration from Team Ag Ed, the National Council for Agricultural Education, the American Association for Agricultural Education and the renewed importance of identifying the factors that influence students' choice to teach, progress towards creating a plentiful supply of well trained, highly qualified agriculture teachers and is within reach.

References

- American Association for Agricultural Education. (2007). Directory. Retrieved from http://www.aaaeonline.org
- Ary, D., Jacobs, L. C., & Razavieh, A. (2002). Introduction to research in education (6th ed.). Belmont, CA: Wadsworth Thompson Learning.
- Berry, W. D., & Feldman, S. (1991). *Multiple regression in practice*. Newbury Park, CA: Sage Publications.
- Camp, W. G. (2000). A national study of the supply and demand for teachers of agricultural education in 1999-2001. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Darling-Hammond, L., & Sykes, G. (2003). Wanted: A national teacher supply policy for education: The right way to meet the 'highly qualified teacher' challenge. *Educational Policy Analysis Archives*, 11 (33). Retrieved from http://epaa.asu.edu/epaa/v11n33/
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research.* Reading, MA: Addison-Wesley.
- Harms, B. M., & Knobloch, N. A. (2005). Pre-service teachers' motivation and leadership behaviors related to career choice. *Career and Technical Education Research*, 30(2), 101-124.
- Hayes, S. (1990). Students' reasons for entering the educational profession. (ERIC Document Reproduction Service No. ED366234). Retrieved from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/15/3b/b8.pd f
- Hillison, J., Camp, W. G., & Burke, S. R. (1987). Why undergraduates choose agricultural education as a major: 1980 vs. 1985. *Journal of Agricultural Education* 28(2), 2-7, 32. doi: 10.5032/jaataea.1987.02002

- Huck, S. W. (2008) Reading statistics and research (5th ed.). New York, NY: Allyn & Bacon.
- Kantrovich, A. J. (2007). A national study of the supply and demand for teachers of agricultural education from 2004 -2006. Morehead, KY: Morehead State University.
- National Council for Agricultural Education, (2008). *10 x 15 Status Reports February 2009*. Retrieved from http://www.ffa.org/teamaged/10x15/documents/10x15_status_report2-7-09.pdf
- Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York, NY: McGraw-Hill.
- Oliver, J., & Hinkle, D. (1982). Occupational educational research: Selecting statistical procedures. *Journal of Studies in Technical Careers*, 4(3), 199 207.
- Park, T. D., & Rudd, R. (2005). A description of the characteristics attributed to students' decisions to teach Agriscience. *Journal of Agricultural Education*, 46(3), 82-94. doi: 10.5032/jae.2005.03082
- Parmley, J. D., Bowen, B. E., & Warmbrod, J. R. (1979, August). *The supply and demand of teachers of agriculture: Can the situation be explained*. Paper presented at the annual meeting of the Central Region Conference in Agricultural Education, Manhattan, KS.
- Peske, H. G., Liu, E., Johnson, S. M., Kauffman, D., & Kardos, S. M. (2001). The next generation of teachers: Changing conceptions of a career in teaching. *Phi Delta Kappan*, 83(4), 304-311.
- Richardson, P. W., & Watt, H. M. G. (2006). Who chooses teaching and why? Profiling characteristics and motivations across three Australian universities. *Asia-Pacific Journal of Teacher Education*, 34(1), 27-56. doi: 10.1080/13598660500480290
- Roberts, T. G., & Dyer, J. E. (2004). In-service needs of traditionally and alternatively certified agriculture teachers. *Journal of Agriculture Education*, 45(4), 57-70. doi: 10.5032/jae.2004.04057
- Seng Yong, B.C. (1995). Teacher trainees' motives for entering into a teaching career in Brunei Darussalam. *Teacher and Teacher Education*, 11(3), 275-280.
- Stiegelbauer, S. (1992, April). Why we want to be teachers: New teachers talk about their reasons for entering the profession. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Watt, H. M. G., & Richardson, P. W. (2007). Motivational factors influencing teaching as a career choice: Development of the FIT-Choice scale. *The Journal of Experimental Education*, 75(3), 167-202.
- Wright, M. D., & Custer, R. L. (1998). Why they want to teach: Factors influencing students to become technology education teachers. *Journal of Technology Education*, 10(1), 58-70.
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